

ABSTRACT

A radio transmission apparatus capable of performing communications with high transmission efficiency. In this apparatus, modulator (2802) modulates data and 5 outputs to spreader (2804). Modulator (2803) modulates data under a modulation scheme having a higher M-ary number than modulator (2802) and outputs the modulated data to spreader (2805). Spreader (2804) spreads the data and outputs the spread data to frequency domain mapping 10 section (2807). Spreader (2805) spreads the data and outputs the spread data to time domain mapping section (2808). Frequency domain mapping section (2807) maps chips with spread data on subcarriers in the frequency domain and outputs the data with chips mapped on 15 subcarriers to IFFT section (107). Time domain mapping section (2808) maps chips with spread data on subcarriers in the time domain and outputs the data with chips mapped on subcarriers to IFFT section (107).